

6.0 Assessment of Transportation Facilities

Based on the existing conditions inventory and assessment, an analysis of operating conditions was conducted for the following elements:

- Existing Roadway Operating Conditions;
- Future Roadway Operating Conditions;
- Safety Assessments;
- Bridge Inventory;
- Bicycle and Pedestrian Facilities;
- Public Transit;
- Freight; and,
- Stakeholder Input.

This analysis documents the baseline operating conditions for each element of the transportation system and forms the foundation for development of improvement recommendations.

6.1 Existing Operating Conditions

The travel demand model, as described in Section 5.0, was developed to assist in the evaluation of the existing and future travel conditions through the study area. More detailed information regarding the model and model development process is presented in the Travel Demand Model Technical Memorandum (dated March, 2004). The key output from the travel demand model is volume to capacity ratio for each roadway segment. The volume to capacity ratios correspond to a level of service based on accepted methodologies from the 2000 Highway Capacity Manual and provided to TEI by GDOT. Existing (2000) and future (2007, 2012, and 2025) operating conditions for the study are summarized in the following sections.

Prior to documenting operating conditions it is useful to summarize level of service. Level of service is a qualitative measure of traffic flow describing operating conditions. Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and F the worst. A facility may operate at a range of levels of service depending upon time of day, day of week or period of the year. A qualitative description of the different levels of service is provided below.

- **LOS A** – Drivers perceive little or no delay and easily progress along a corridor.
- **LOS B** – Drivers experience some delay but generally driving conditions are favorable.
- **LOS C** – Travel speeds are slightly lower than the posted speed with noticeable delay in intersection areas.

- **LOS D** – Travel speeds are well below the posted speed with few opportunities to pass and considerable intersection delay.
- **LOS E** – The facility is operating at capacity and there are virtually no useable gaps in the traffic.
- **LOS F** – More traffic desires to use a particular facility than it is designed to handle resulting in extreme delays.

The existing conditions scenario for the Columbia Model was used to determine deficient roadway segments. The best approach to determine deficient segments in Columbia County is to analyze the volume of traffic on the roadway segments compared to the actual capacity of those segments. GDOT has identified the following minimum acceptable level of service (LOS) thresholds for roadway operating conditions. For daily operating conditions any segment with a LOS D or worse is identified as deficient. For peak hour operating conditions any segment identified as LOS E or worse is considered deficient.

The existing analysis shows that fourteen (14) roadway segments can be expected to operate below LOS E during the AM peak period. Of these fourteen (14) segments, eleven (11) can be expected to also operate below LOS E during the PM peak period. Three (3) minor segments can be expected to operate below LOS D under daily conditions.

Table 6.1 displays the deficient roadway segments with their LOS for AM peak, PM peak and daily operating conditions.

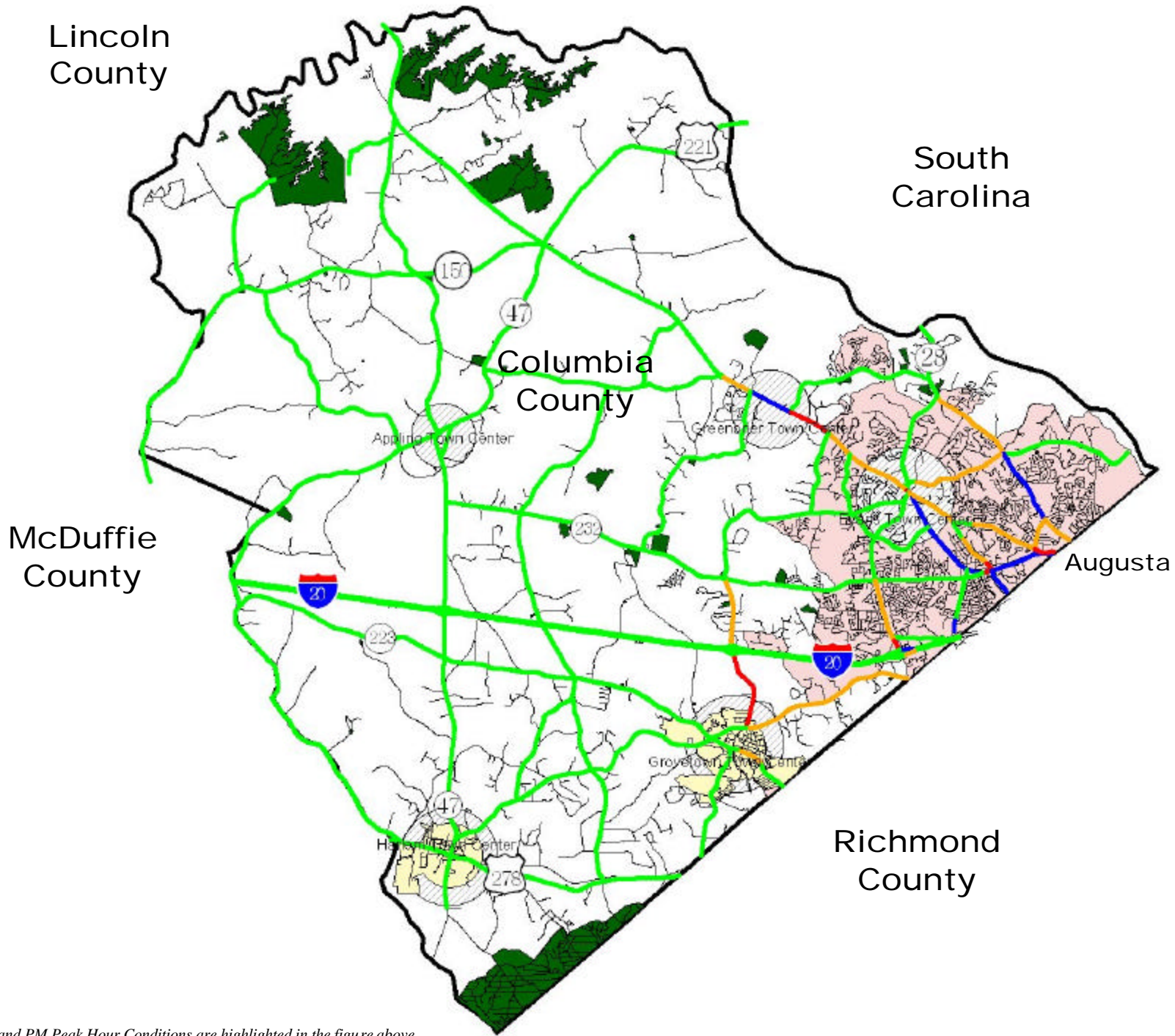
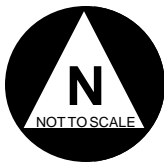
Table 6.1
Summary of Existing Operating Deficiencies

Roadway	From	To	AM		PM		Daily	
			Volume ⁽¹⁾	LOS	Volume ⁽¹⁾	LOS	Volume ⁽²⁾	LOS
Belair Rd	Between I-20 Ramps		2,167	F	1,642	D	25,008	C
Belair Rd	I-20 WB Ramp	Wheeler Rd	2,000	F	1,759	E	24,797	C
Bobby Jones Expy	Washington Rd	Richmond County	1,894	E	1,981	E	29,170	C
I-20 WB off-ramp	Belair Rd		479	C	810	E	5,590	
Lewiston Rd	Between I-20 Ramps		757	E	893	F	11,207	C
Horizon South Pkwy	I-20 Ramp	Wrightsboro Rd	899	F	724	D	10,829	C
Horizon South Pkwy	Wrightsboro Rd	Robinson Ave	848	E	712	D	9,786	C
Old Evans Rd	Martinez Blvd	Washington Rd	833	F	817	F	13,058	D
Washington Rd	William Few Pkwy	Hardy McManus Rd	1,000	E	1,008	E	15,420	C
Washington Rd	Hardy McManus Rd	Blanchard Rd	1,279	F	1,225	E	17,513	C
Washington Rd	N Belair Rd	Belair Rd	2,257	F	2,157	F	32,514	D
Washington Rd	Town Center Dr	Owens Rd	1,956	E	1,900	E	27,085	C
Washington Rd	Owens Rd	Flowing Wells Rd	1,968	E	1,885	E	27,038	C
Washington Rd	Columbia Rd	Bobby Jones Expy	3,074	F	2,953	F	40,800	E
Washington Rd	Davis Rd	Baston Rd	1,932	E	1,819	E	27,960	C

(1) - Segment volume is the weighted average of link volume by distance; peak direction volume

(2) - Two-way volumes

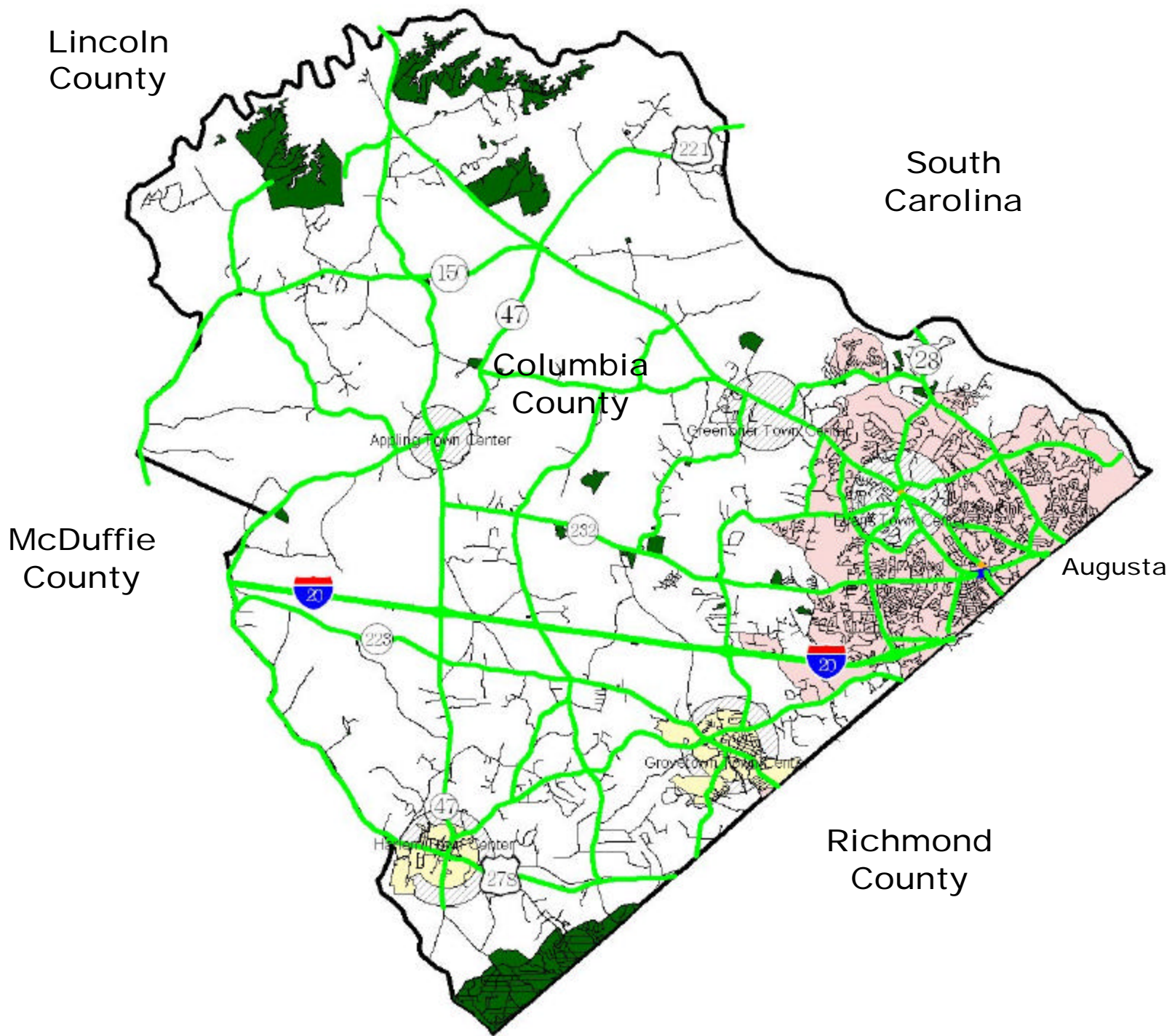
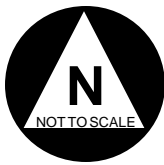
Figure 6.1.1 and Figure 6.1.2 present the peak hour and daily deficient segments.



Legend

- Level of Service
- LOS C and Better
- LOS D
- LOS E
- LOS F
- Local Roads
- City Boundary
- Town Center
- Urbanized Area

Note: AM and PM Peak Hour Conditions are highlighted in the figure above.



Legend

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6.2 Future Operating Conditions

The future operating conditions scenarios for the Columbia Model were used to determine future deficient roadway segments. The scenarios were spread across the 2025 horizon year to facilitate the staging of recommended improvements. The following scenarios were analyzed:

- 2007 Near Term
- 2012 Mid Term
- 2025 Long Term

The future operating conditions were analyzed using the existing network with the addition of the committed projects. The committed projects were previously documented in Section 4.0 and included STIP projects. The best approach to determine deficient segments in Columbia County was to analyze the volume of traffic on the roadway segments compared to the actual capacity of those segments. The corresponding V/C ratios were assigned a LOS and all roads with an LOS D or worse for daily operating conditions and LOS E or worse for peak hour operating conditions were identified as deficient.

6.2.1 2007 (Near Term)

The Near Term scenario was evaluated for 2007 to evaluate the traffic conditions with the existing plus committed projects. This scenario is beneficial in showing additional projects that should be considered in the near term to maintain safe and efficient roadways within the County.

The Near Term analysis shows that twenty-six (26) roadway segments can be expected to operate below LOS E during the AM peak period. Of these twenty-two (22) segments, twenty (20) can be expected to also operate below LOS E during the PM peak period. Nineteen (19) segments can be expected to operate below LOS D under daily conditions.

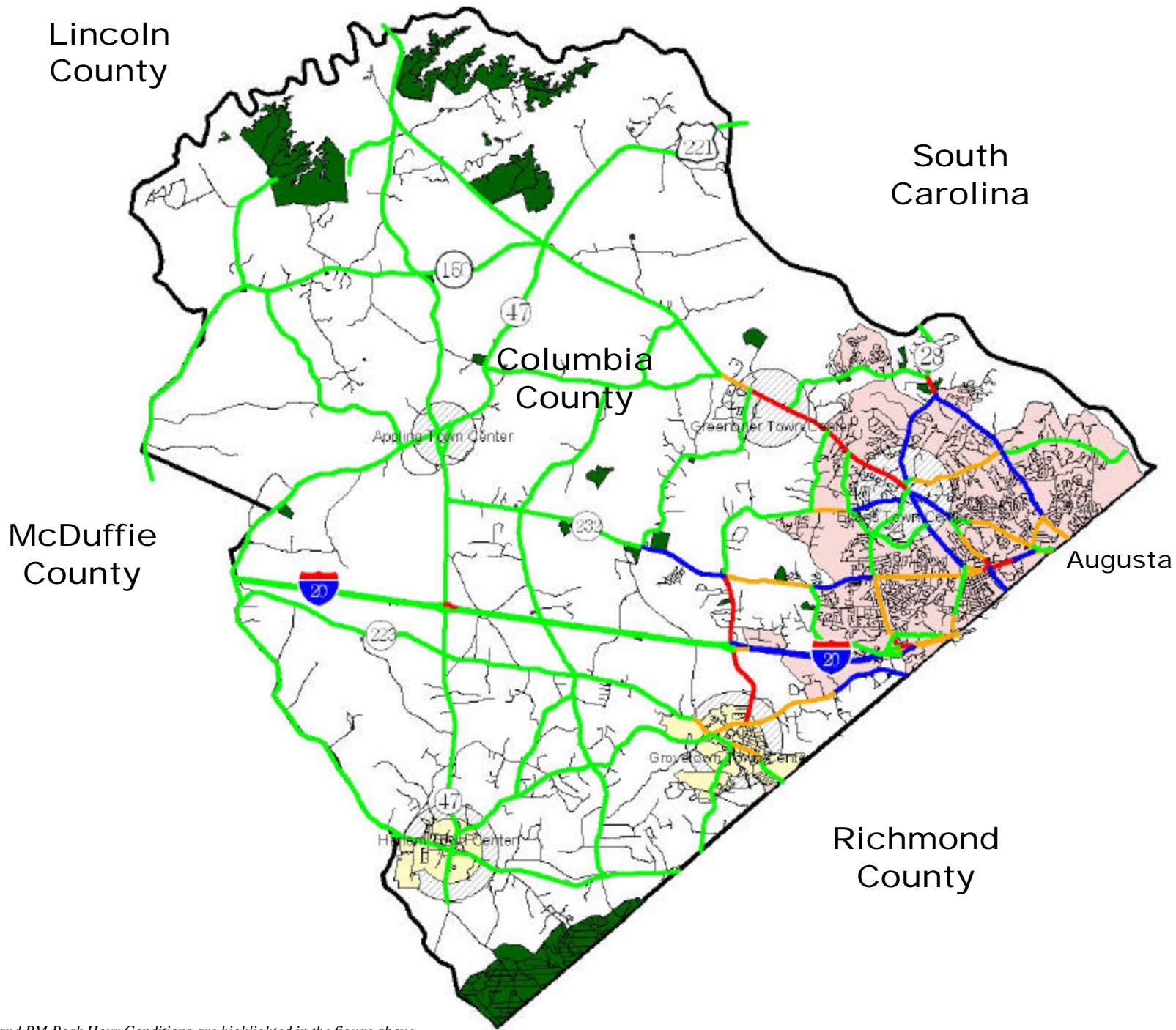
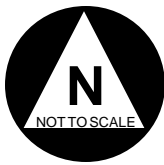
Table 6.2.1 displays the Near Term deficient roadway segments for the peak hours and daily operating conditions. Additionally, Figure 6.2.1.1 and Figure 6.2.1.2 present the peak hour and daily deficient segments.

Table 6.2.1
Summary of Near Term Operating Deficiencies

Roadway	From	To	AM		PM		Daily	
			Volume ⁽¹⁾	LOS	Volume ⁽¹⁾	LOS	Volume ⁽²⁾	LOS
Belair Rd	Wheeler Rd	I-20	2,120	F	1,914	E	27,333	C
Bobby Jones Expy	Washington Rd	Richmond County	1,765	E	1,868	E	28,900	C
Columbia Rd	William Few Pkwy	Hereford Farm Rd	912	E	843	D	10,939	C
Columbia Rd	Old Belair Rd	Belair Rd	871	E	761	D	10,663	C
Fury's Ferry Rd	Hardy McManus Rd	N Belair Rd	964	E	1,003	F	17,363	E
Fury's Ferry Rd	N Belair Rd	Evans To Locks Rd	1,042	E	1,027	E	16,415	D
Fury's Ferry Rd	Evans To Locks Rd	Baston Rd	1,660	E	1,660	E	23,001	C
Hereford Farm Rd	Belair Rd	Gibbs Rd	911	E	829	D	11,401	C
Horizon South Pkwy	I-20	Wrightsboro Rd	1,007	F	786	E	11,621	C
I-20 EB	Appling Harlem Rd	Lewiston Rd	2,450	C	2,600	C	28,890	D
I-20 EB	Lewiston Rd	Belair Rd	3,350	E	2,930	D	32,220	D
I-20 EB	I-20 WB at Belair Rd Between Ramp		2,069	C	3,130	D	29,039	D
I-20 EB	Belair Rd	Lewiston Rd	2,260	C	3,370	E	31,450	D
I-20 EB	Lewiston Rd	Appling Harlem Rd	2,060	C	2,730	C	28,370	D
I-20 Ramp	WB Off-Ramp at Belair Rd		579	C	931	F	6,470	D
I-20 Ramp	EB On-Ramp at Belair Rd		1,441	E	938	C	9,002	C
I-20 Ramp	WB Off-Ramp at Appling Harlem Rd		641	C	969	F	7,741	D
Lewiston Rd	Columbia Rd	I-20	970	F	943	F	14,760	E
N Belair Rd	Fury's Ferry Rd	Evans To Locks Rd	711	D	784	E	12,374	C
Old Evans Rd	Old Petersburg Rd	Washington Rd	733	E	706	E	9,676	C
Old Evans Rd	Martinez Blvd	Washington Rd	759	E	784	F	12,469	D
Washington Rd	William Few Pkwy	Hardy McManus Rd	1,216	F	1,169	F	17,429	D
Washington Rd	Hardy McManus Rd	Blanchard Rd	1,478	F	1,345	F	18,843	E
Washington Rd	Blanchard Rd	Gibbs Rd	1,384	F	1,344	F	18,046	D
Washington Rd	Gibbs Rd	Evans To Locks Rd	1,436	F	1,280	F	18,463	E
Washington Rd	Evans To Locks Rd	N Belair Rd	1,209	F	1,100	F	15,874	D
Washington Rd	N Belair Rd	Belair Rd	1,669	F	1,710	F	24,514	F
Washington Rd	Old Evans Rd	Owens Rd	1,845	E	1,774	E	25,504	C
Washington Rd	Owens Rd	Flowing Wells Rd	1,863	E	1,764	E	25,850	C
Washington Rd	Columbia Rd	Bobby Jones Expy	2,979	F	2,724	F	39,057	E
Washington Rd	Bobby Jones Expy	Davis Rd	2,045	F	1,791	E	26,132	C
Washington Rd	Davis Rd	Baston Rd	1,930	E	1,884	E	29,808	D
Wrightsboro Rd	Reynolds Rd	Richmond County	860	E	815	D	12,050	C

(1) - Segment volume is the weighted average of link volume by distance; peak direction volume

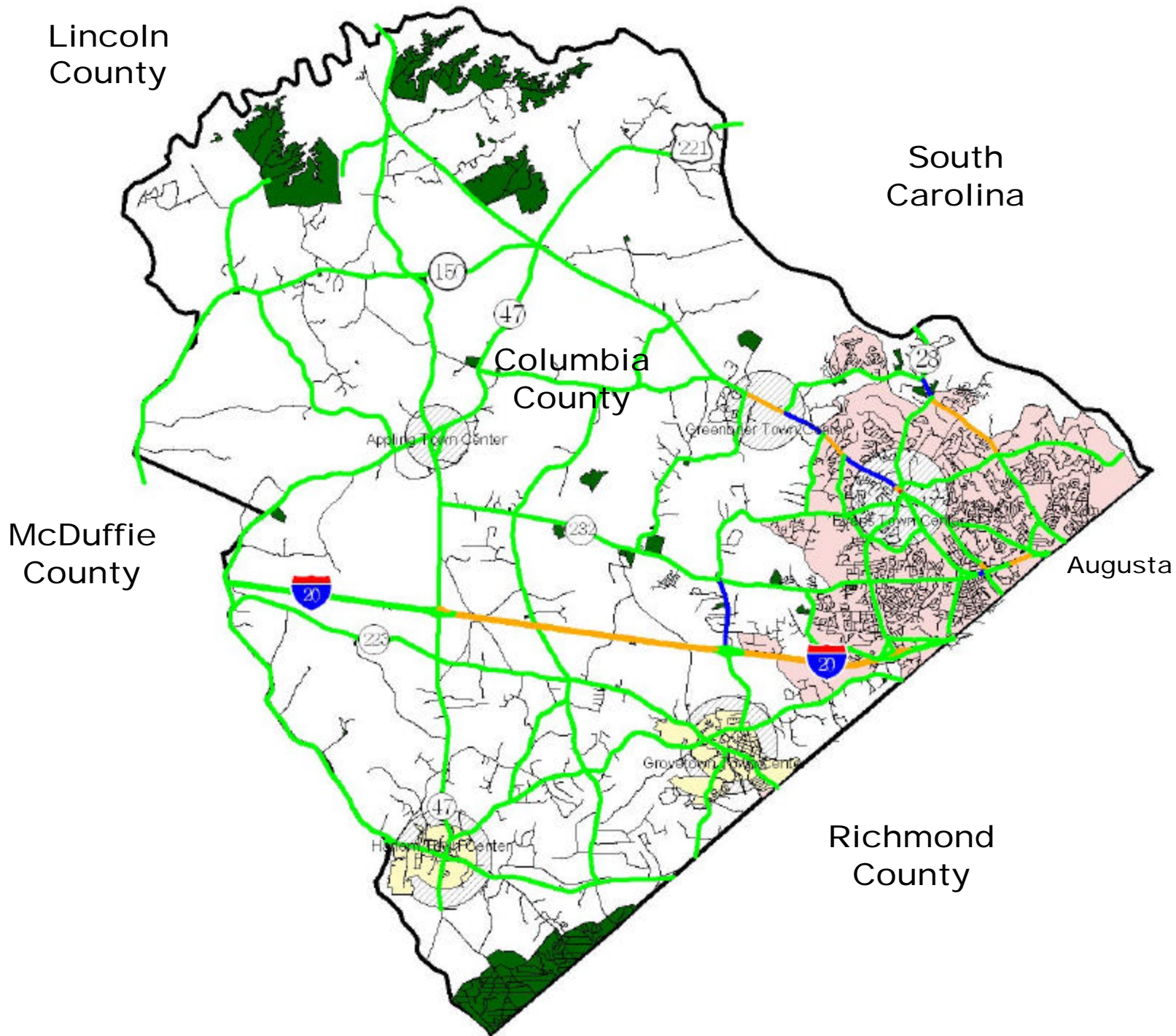
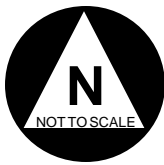
(2) - Two-way volumes



Legend

- Level of Service
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Note: AM and PM Peak Hour Conditions are highlighted in the figure above.



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6.2.2 2012 (Mid Term)

The Mid Term scenario was evaluated for the year 2012. This scenario is beneficial in showing additional projects that should be considered between the near term and the mid term to maintain efficient roadways within the County. By staging this second interim scenario five years from the previous analysis scenario, it was possible to determine incremental changes in the travel demands through Columbia County.

The Mid Term analysis shows that thirty-seven (37) roadway segments can be expected to operate at an unacceptable LOS during the AM peak period. Additionally, thirty-four (34) can be expected to operate at an unacceptable LOS during the PM peak period. Of these roadway segments, twenty-eight (28) segments operate at an unacceptable LOS for both the AM and PM peak periods. Forty-one (41) minor segments can be expected to operate below LOS D under daily conditions.

Table 6.2.2 displays the 2012 Mid Term roadway segments operating at an unacceptable LOS. Additionally, Figure 6.2.2.1 and Figure 6.2.2.2 present the peak hour and daily deficient segments.

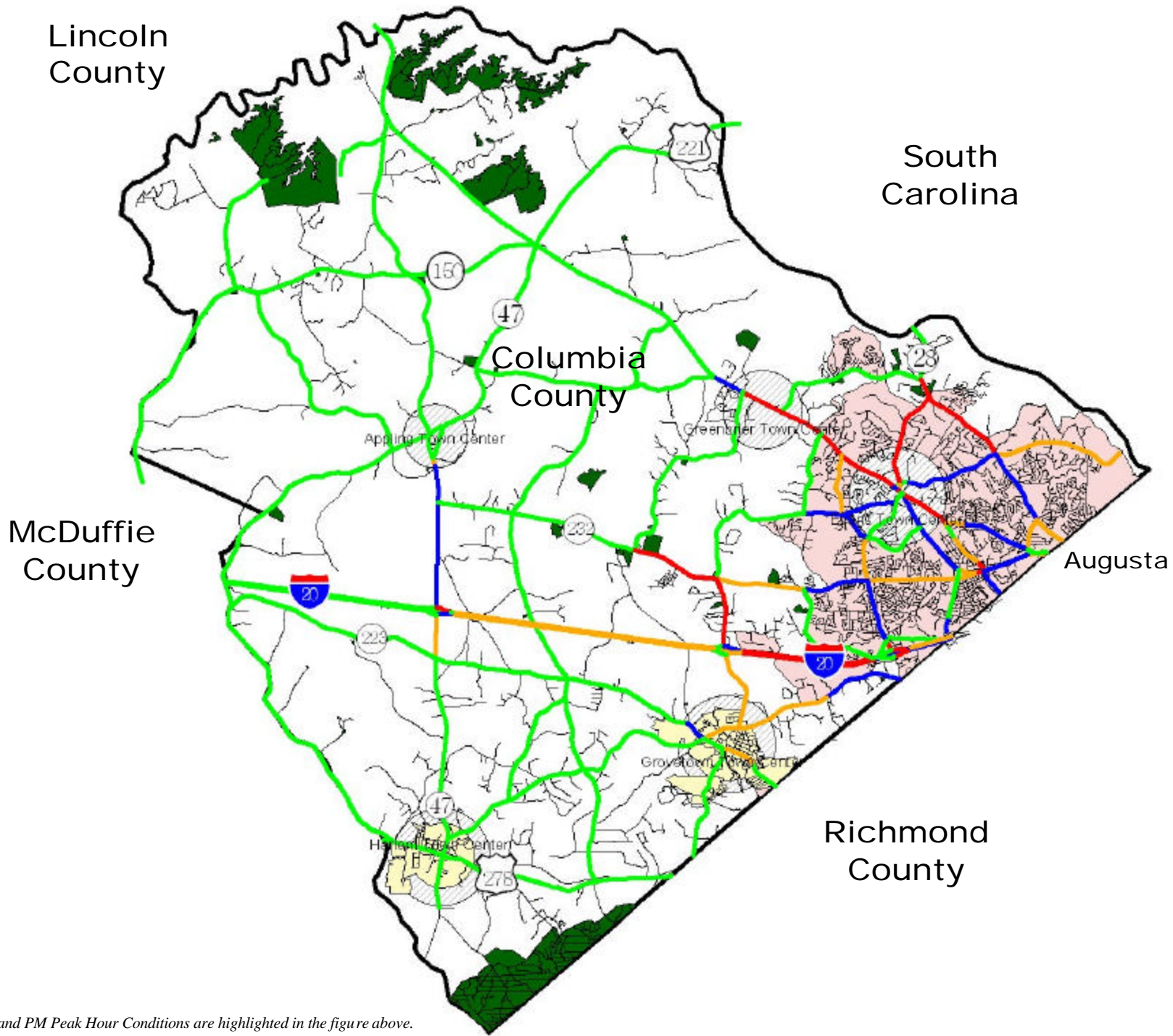
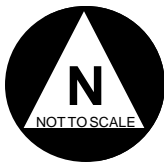
Table 6.2.2
Summary of Mid Term Operating Deficiencies

Roadway	From	To	AM		PM		Daily	
			Volume ⁽¹⁾	LOS	Volume ⁽¹⁾	LOS	Volume ⁽²⁾	LOS
Appling Harlem Rd	Columbia Rd	I-20	819	E	707	D	12,069	C
Belair Rd	Columbia Rd	Wheeler Rd	1,983	E	1,807	E	26,929	C
Belair Rd	Wheeler Rd	I-20	2,415	F	1,932	E	30,565	D
Bobby Jones Expy	Washington Rd	Richmond County	1,700	E	1,979	E	29,784	D
Columbia Rd	William Few Pkwy	Hereford Farm Rd	1,076	F	1,006	E	12,804	C
Columbia Rd	Old Belair Rd	Belair Rd	910	E	831	D	11,379	C
Cox Rd	Hereford Farm Rd	Belair Rd	672	E	487	C	7,642	C
Evans to Locks Rd	Fury's Ferry Rd	Industrial Park Dr	698	E	700	E	9,859	C
Flowing Wells Rd	I-20	Wind Ridge Dr	809	E	716	D	10,326	C
Fury's Ferry Rd	Hardy McManus Rd	N Belair Rd	1,042	F	1,106	F	19,379	E
Fury's Ferry Rd	N Belair Rd	Evans To Locks Rd	1,034	F	1,026	E	16,715	D
Fury's Ferry Rd	Evans To Locks Rd	Baston Rd	1,498	D	1,656	E	22,048	C
Hereford Farm Rd	Belair Rd	Gibbs Rd	972	E	874	D	11,922	C
Hereford Farm Rd	Gibbs Rd	Blanchard Rd	974	E	839	D	12,534	C
I-20 EB	Appling Harlem Rd	Lewiston Rd	3,160	D	3,230	D	35,850	E
I-20 EB	I-20 EB at Lewiston Rd Between Ramp		2,880	D	2,931	D	32,631	D
I-20 EB	Lewiston Rd	Belair Rd	3,950	F	3,530	E	38,770	E

Roadway	From	To	AM		PM		Daily	
			Volume ⁽¹⁾	LOS	Volume ⁽¹⁾	LOS	Volume ⁽²⁾	LOS
I-20 EB	I-20 EB at Belair Rd Between Ramp		3,500	E	3,099	D	34,331	E
I-20 EB	Belair Rd	Flowing Wells Rd	5,380	E	4,420	D	46,680	D
I-20 WB	I-20 WB at Belair Rd Between Ramp		2,359	C	3,560	E	33,481	E
I-20 WB	Belair Rd	Lewiston Rd	2,650	C	3,930	F	37,140	E
I-20 WB	I-20 WB at Lewiston Rd Between Ramp		2,220	C	3,070	D	31,390	D
I-20 WB	Lewiston Rd	Appling Harlem Rd	2,440	C	3,330	D	34,120	E
I-20 Ramp	WB Off-Ramp at Belair Rd		600	C	959	F	6,791	D
I-20 Ramp	EB On-Ramp at Belair Rd		1,881	F	1,321	E	12,350	D
I-20 Ramp	WB Off-Ramp at Appling Harlem Rd		820	E	1,301	F	10,421	F
I-20 Ramp	EB On-Ramp at Appling Harlem Rd		1,511	E	1,180	D	11,839	D
Lewiston Rd	Columbia Rd	I-20	1,110	F	1,094	F	16,451	E
N Belair Rd	Fury’s Ferry Rd	Evans To Locks Rd	859	E	909	F	14,641	D
Old Evans Rd	Old Petersburg Rd	Washington Rd	780	E	923	F	11,395	C
Old Evans Rd	Martinez Blvd	Washington Rd	792	F	801	F	12,761	D
Old Petersburg Rd	Old Evans Rd	Baston Rd	791	D	930	E	12,415	C
Ray Owens Rd	Shucraft Rd	Columbia Rd	830	E	740	D	12,550	C
Washington Rd	Old Washington Rd	William Few Pkwy	940	D	980	E	14,830	C
Washington Rd	William Few Pkwy	Hardy McManus Rd	1,339	F	1,309	F	18,770	E
Washington Rd	Hardy McManus Rd	Blanchard Rd	1,600	F	1,499	F	20,033	E
Washington Rd	Blanchard Rd	Gibbs Rd	1,486	F	1,414	F	18,446	E
Washington Rd	Gibbs Rd	Evans To Locks Rd	1,250	F	1,280	F	16,570	D
Washington Rd	Evans To Locks Rd	N Belair Rd	952	E	1,006	E	12,949	C
Washington Rd	N Belair Rd	Belair Rd	1,642	F	1,724	F	24,337	F
Washington Rd	Old Evans Rd	Owens Rd	1,834	E	1,770	E	25,314	C
Washington Rd	Owens Rd	Flowing Wells Rd	1,754	E	1,730	E	24,770	C
Washington Rd	Columbia Rd	Bobby Jones Expy	2,771	F	2,760	F	38,109	E
Washington Rd	Bobby Jones Expy	Davis Rd	1,861	E	1,731	E	24,786	C
Washington Rd	Davis Rd	Baston Rd	1,791	E	1,841	E	29,067	C
Wrightsboro Rd	Chamblin Rd	Harlem Grovetown Rd	860	E	808	D	11,629	C
Wrightsboro Rd	Reynolds Rd	Richmond County	897	E	879	E	12,747	C

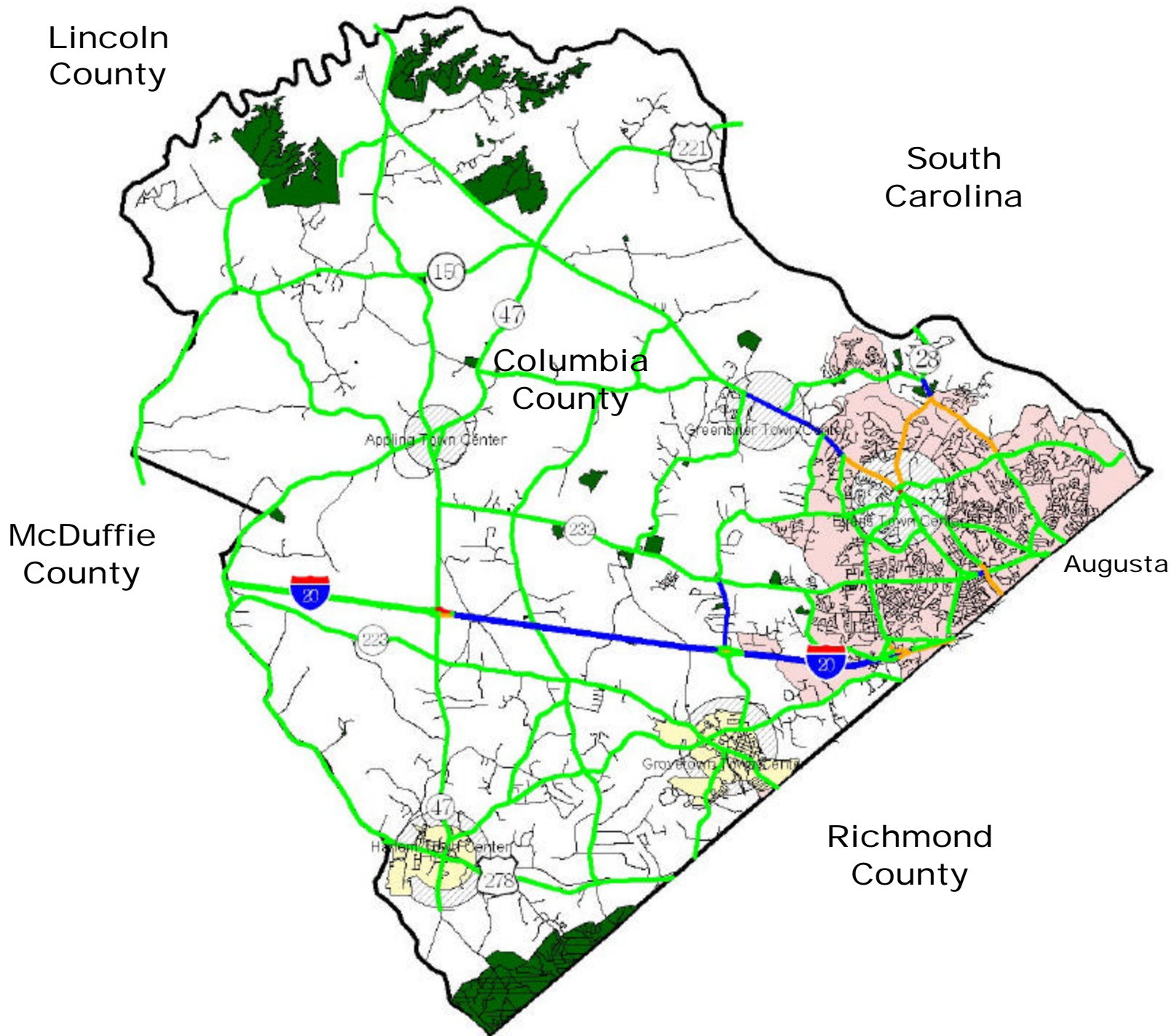
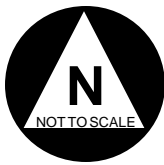
(1) - Segment volume is the weighted average of link volume by distance; peak direction volume

(2) - Two-way volumes



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6.2.3 2025 (Long Term)

The Long Term scenario was evaluated for the year 2025, the study horizon year. This extended horizon provides an opportunity to determine how well the existing plus committed projects will serve 2025 population and employment in Columbia County. It is useful to point out that the long term projects for population and employment are the least reliable. Not due to any inaccuracies with projection techniques but simply because it requires the judgment of stakeholders to assign population and employment for the study area. This in turn impacts estimates of traffic demand. These results should be considered preliminary and when the transportation plan is updated every 3 to 5 years the projects should be amended as necessary.

The Long Term analysis shows that fifty-five (55) roadway segments can be expected to operate below LOS E during the AM peak period. Additionally, fifty-five (55) can be expected to operate below LOS E during the PM peak period. Of these roadway segments, fifty-one (51) segments operate below LOS E for both the AM and PM peak periods. Under daily conditions, forty-five (45) roadway segments are expected to operate below LOS D.

Table 6.2.3 displays the 2025 Long Term roadway segments operating at an unacceptable LOS. Additionally, Figure 6.2.3.1 and Figure 6.2.3.2 present the peak hour and daily deficient segments.

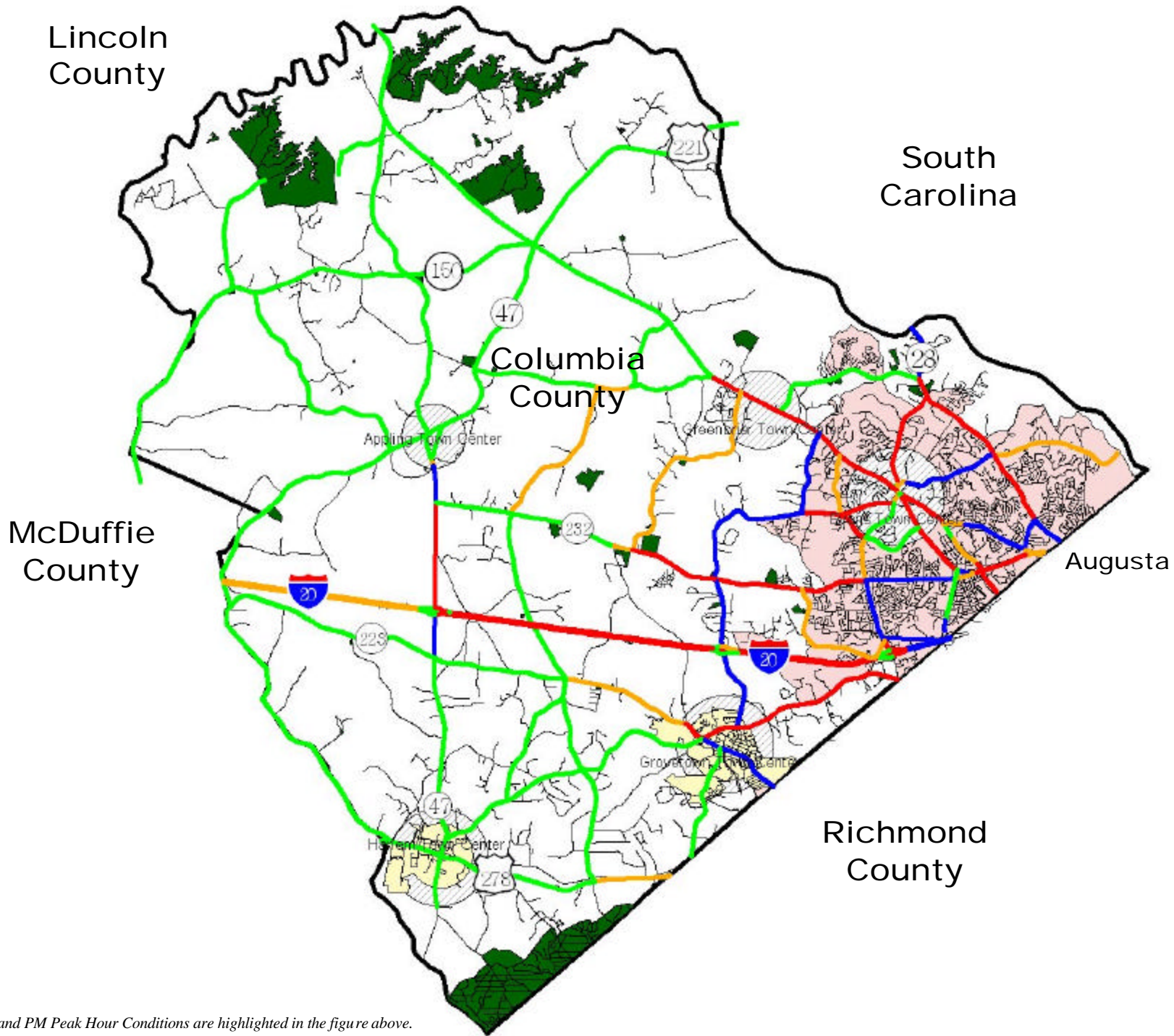
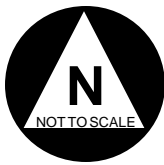
Table 6.2.3
Summary of Long Term Operating Deficiencies

Roadway	From	To	AM		PM		Daily	
			Volume ⁽¹⁾	LOS	Volume ⁽¹⁾	LOS	Volume ⁽²⁾	LOS
Appling Harlem Rd	Columbia Rd	I-20	1,095	F	1,105	F	18,959	E
Appling Harlem Rd	I-20	Wrightsboro Rd	842	D	891	E	16,515	D
Baston Rd	Fury's Ferry Rd	Old Petersburg Rd	1,425	E	1,326	E	18,270	C
Belair Rd	Columbia Rd	Wheeler Rd	1,704	E	1,852	E	27,181	C
Belair Rd	Wheeler Rd	I-20	1,982	F	2,173	F	31,019	D
Blanchard Rd	Washington Rd	Hereford Farm Rd	627	E	579	D	8,068	C
Bobby Jones Expy	Washington Rd	County Boundary	1,786	E	2,064	F	32,912	D
Columbia Rd	William Few Pkwy	Hereford Farm Rd	1,282	F	1,190	F	15,603	D
Columbia Rd	Hereford Farm Rd	Old Belair Rd	1,052	F	968	E	12,994	C
Columbia Rd	Old Belair Rd	Belair Rd	1,043	F	1,032	F	12,631	C
Columbia Rd	Belair Rd	Flowing Wells Rd	1,630	E	1,488	D	19,992	C
Cox Rd	Hereford Farm Rd	Belair Rd	741	F	681	E	9,228	C
Evans to Locks Rd	Fury's Ferry Rd	Industrial Park Dr	758	E	750	E	10,530	C
Flowing Wells Rd	I-20	Wind Ridge Dr	814	E	801	E	12,407	C
Fury's Ferry Rd	South Carolina	Hardy McManus Rd	720	D	929	E	20,520	F
Fury's Ferry Rd	Hardy McManus Rd	N Belair Rd	1,383	F	1,492	F	27,448	F
Fury's Ferry Rd	N Belair Rd	Evans To Locks Rd	1,174	F	1,250	F	21,334	F
Fury's Ferry Rd	Evans To Locks Rd	Baston Rd	1,936	F	1,886	F	26,776	C
Fury's Ferry Rd	Baston Rd	Richmond County	1,840	E	1,710	E	24,429	C
Hereford Farm Rd	Belair Rd	Gibbs Rd	1,268	F	1,129	F	15,224	D
Hereford Farm Rd	Gibbs Rd	Blanchard Rd	1,297	F	1,175	F	16,193	D
Hereford Farm Rd	Blanchard Rd	Columbia Rd	918	E	846	D	12,874	C
Horizon South Pkwy	I-20	Wrightsboro Rd	779	E	575	C	9,293	C
I-20 EB	McDuffie County	Appling Harlem Rd	2,420	C	3,020	D	35,190	E
I-20 EB	at Appling Harlem Rd Between Ramp		2,151	C	2,690	C	31,300	D
I-20 EB	Appling Harlem Rd	Lewiston Rd	3,790	E	4,120	F	45,400	F
I-20 EB	I-20 EB at Lewiston Rd Between Ramp		3,480	E	3,821	E	42,140	F
I-20 EB	Lewiston Rd	Belair Rd	4,390	F	4,440	F	48,230	F
I-20 EB	I-20 EB at Belair Rd Between Ramp		3,811	F	3,880	F	42,161	F
I-20 EB	Belair Rd	Flowing Wells Rd	5,340	E	5,060	E	53,470	E
I-20 WB	Flowing Wells Rd	Belair Rd	3,631	C	5,451	E	50,861	E
I-20 WB	I-20 WB at Belair Rd Between Ramp		2,989	D	4,310	F	42,900	F
I-20 WB	Belair Rd	Lewiston Rd	3,220	D	4,620	F	46,030	F
I-20 WB	I-20 WB at Lewiston Rd Between Ramp		2,851	D	3,930	F	41,029	F

Roadway	From	To	AM		PM		Daily	
			Volume ⁽¹⁾	LOS	Volume ⁽¹⁾	LOS	Volume ⁽²⁾	LOS
I-20 WB	Lewiston Rd	Appling Harlem Rd	3,030	D	4,160	F	43,390	F
I-20 WB	at Appling Harlem Rd	Between Ramp	2,080	C	2,580	C	30,280	D
I-20 WB	Appling Harlem Rd	McDuffie County	2,290	C	2,840	D	33,300	D
I-20 Ramp	WB Off-Ramp at Belair Rd		642	D	1,141	F	7,960	E
I-20 Ramp	EB On-Ramp at Belair Rd		1,520	F	1,179	D	11,321	D
I-20 Ramp	WB Off-Ramp at Appling Harlem Rd		961	F	1,580	F	13,120	F
I-20 Ramp	EB On-Ramp at Appling Harlem Rd		1,631	F	1,431	E	14,091	E
Lewiston Rd	Columbia Rd	I-20	680	D	720	E	11,707	D
N Belair Rd	Fury's Ferry Rd	Evans To Locks Rd	930	F	956	F	15,786	E
Old Evans Rd	Old Petersburg Rd	Washington Rd	825	F	828	F	11,398	C
Old Evans Rd	Martinez Blvd	Washington Rd	851	F	892	F	14,320	E
Old Petersburg Rd	Old Evans Rd	Baston Rd	891	E	861	E	13,364	C
Ray Owens Rd	Newmantown Rd	Richmond County	786	D	801	D	13,689	D
Ray Owens Rd	Shucraft Rd	Columbia Rd	900	E	940	E	16,290	E
Robinson Ave	Wrightsboro Rd	Newmantown Rd	910	E	750	D	11,422	C
Robinson Ave	Wrightsboro Rd	Newmantown Rd	794	E	741	D	11,503	C
Robinson Ave	Newmantown Rd	Richmond County	801	E	660	D	9,812	C
Washington Rd	Old Washington Rd	William Few Pkwy	1,230	F	1,230	F	18,860	E
Washington Rd	William Few Pkwy	Hardy McManus Rd	1,734	F	1,667	F	24,003	F
Washington Rd	Hardy McManus Rd	Blanchard Rd	1,934	F	1,786	F	23,707	F
Washington Rd	Blanchard Rd	Gibbs Rd	1,702	F	1,585	F	20,640	E
Washington Rd	Gibbs Rd	Evans To Locks Rd	1,508	F	1,431	F	19,523	E
Washington Rd	Evans To Locks Rd	N Belair Rd	1,131	F	1,178	F	15,686	D
Washington Rd	N Belair Rd	Belair Rd	1,847	F	1,874	F	27,497	F
Washington Rd	Old Evans Rd	Owens Rd	1,960	E	1,995	F	28,827	C
Washington Rd	Owens Rd	Flowing Wells Rd	1,950	E	2,001	F	29,483	C
Washington Rd	Flowing Wells Rd	Columbia Rd	1,717	E	1,739	E	26,077	C
Washington Rd	Columbia Rd	Bobby Jones Expy	3,042	F	3,021	F	42,896	F
Washington Rd	Bobby Jones Expy	Davis Rd	1,943	F	1,847	E	26,447	C
Washington Rd	Davis Rd	Baston Rd	1,956	E	2,096	F	32,751	D
Wheeler Rd	Belair Rd	Flowing Wells Rd	755	E	569	C	8,905	C
Wrightsboro Rd	Chamblin Rd	Harlem Grovetown Rd	1,200	F	1,220	F	16,930	E
Wrightsboro Rd	Robinson Ave	Horizon South Pkwy	1,024	F	924	E	13,620	C
Wrightsboro Rd	Horizon South Pkwy	Reynolds Rd	1,072	F	1,032	F	15,350	D
Wrightsboro Rd	Reynolds Rd	Richmond County	1,127	F	1,085	F	16,386	D

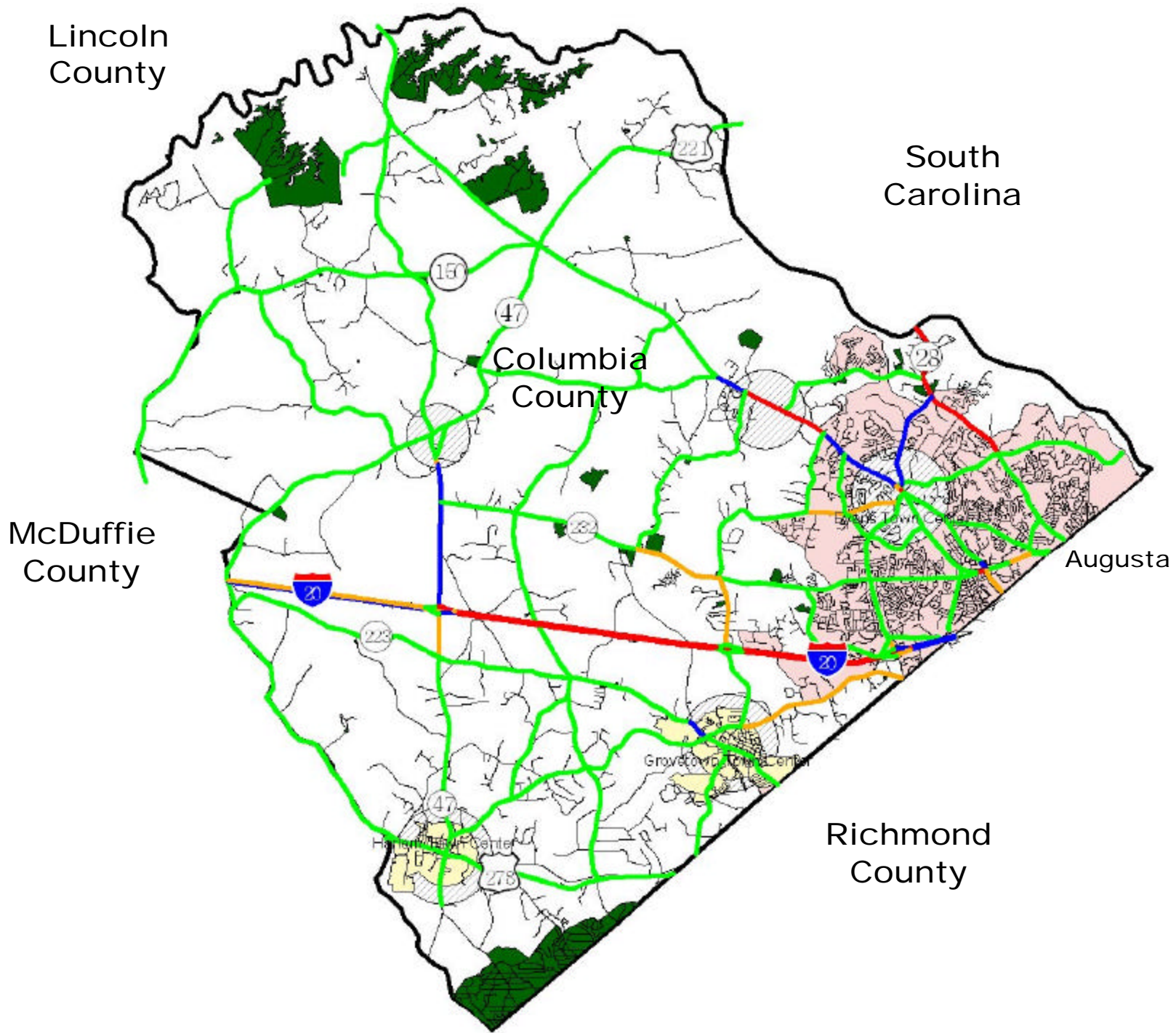
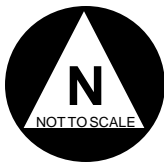
(1) - Segment volume is the weighted average of link volume by distance; peak direction volume

(2) - Two-way volumes



- Legend**
- Level of Service
 - LOS C and Better
 - LOS D
 - LOS E
 - LOS F
 - Local Roads
 - City Boundary
 - Town Center
 - Urbanized Area

Note: AM and PM Peak Hour Conditions are highlighted in the figure above.



- Legend**
- Level of Service
 - LOS C and Better
 - LOS D
 - LOS E
 - LOS F
 - Local Roads
 - City Boundary
 - Town Center
 - Urbanized Area

6.3 Summary of Safety Assessments

The latest three years of available crash data from the Georgia Department of Transportation (1997, 1998 and 2001) was collected for state roads and analyzed for the entire study area. Additionally, available crash data along the county roads was collected for 1999-2001. The crash data was used to determine locations with potential safety deficiencies through the study area.

The safety analysis revealed thirty-three (33) intersections with at least thirty (30) crashes within the 3-year analysis period. It is likely that many of these locations experience a high number of crashes due to volume and not due to geometric or safety deficiencies. These intersections are documented in Table 6.3.

Table 6.3
Intersection Crash Analysis

Road Name	Crossing Street	Crashes
Bobby Jones Expy/Old Evans Rd	Washington Rd	128
Columbia Rd/Ruth St	Washington Rd	103
Washington Rd	Bobby Jones Expy	102
Washington Rd	Columbia Rd	93
Industrial Park Dr/N Belair Rd	Washington Rd	91
Davis Rd	Washington Rd	88
Baston Rd	Washington Rd	80
Columbia Rd	N Belair Rd/S Belair Rd	79
I-20 WB Ramps	Jimmie Dyess Pkwy/S Belair Rd	79
S Belair Rd	S Old Belair Rd/Wheeler Rd	76
Belair Frontage Rd/Park West Dr	Jimmie Dyess Pkwy	72
I-20 EB Ramps	Jimmie Dyess Pkwy/S. Belair Rd	69
Washington Rd	Davis Rd	65
Old Evans Rd (West end in Evans)	Washington Rd	61
Baston Rd	Martinez Blvd (right in/right out only -late 2002)	60
Bobby Jones Expy	Rose Ln/Settlement Rd	58
Columbia Rd	Belair Rd	57
Washington Rd	Belair Rd	56
Washington Rd	Baston Rd	54
Baston Rd	Old Petersburg Rd	54
Evans to Locks Rd	Fury's Ferry Rd	52
Cox Rd/Owens Rd	N Belair Rd	51
Oak St N	Washington Rd	48
Columbia Rd	Flowing Wells Rd	43
Evans to Locks Rd	Washington Rd	43
Towne Center Dr	Washington Rd	40

Road Name	Crossing Street	Crashes
Washington Rd	Evans to Locks Rd	37
Fury's Ferry Rd	Evans To Locks Rd	36
Flowing Wells Rd	Washington Rd	35
Country Place Ln/Fieldstone Way	Washington Rd	34
Baston Rd/Vaughn Rd	Fury's Ferry Rd	31
Evans to Locks Rd	Stevens Creek Rd	30
Hereford Farm Rd/Towne Center Dr	N Belair Rd	30

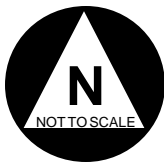
Figure 6.3 shows the high crash locations in Columbia County.

These intersections were considered candidates for roadway improvements as part of the strategy screening process. Potential improvements could either address safety issues, as determined by crash history or capacity deficiencies as determined in the previous section.

Exploring the need for intersection improvements, turn lanes, signalization and raised medians to better 'channelize' traffic and lower conflict points at these locations should be considered. According to GDOT, raised medians increase the capacity of the roadway, reduce accidents, lower congestion, provide pedestrian refuge and often save lives. They may also be landscaped to beautify corridors and may become focal points for community landscaping efforts.

Lincoln
County

South
Carolina

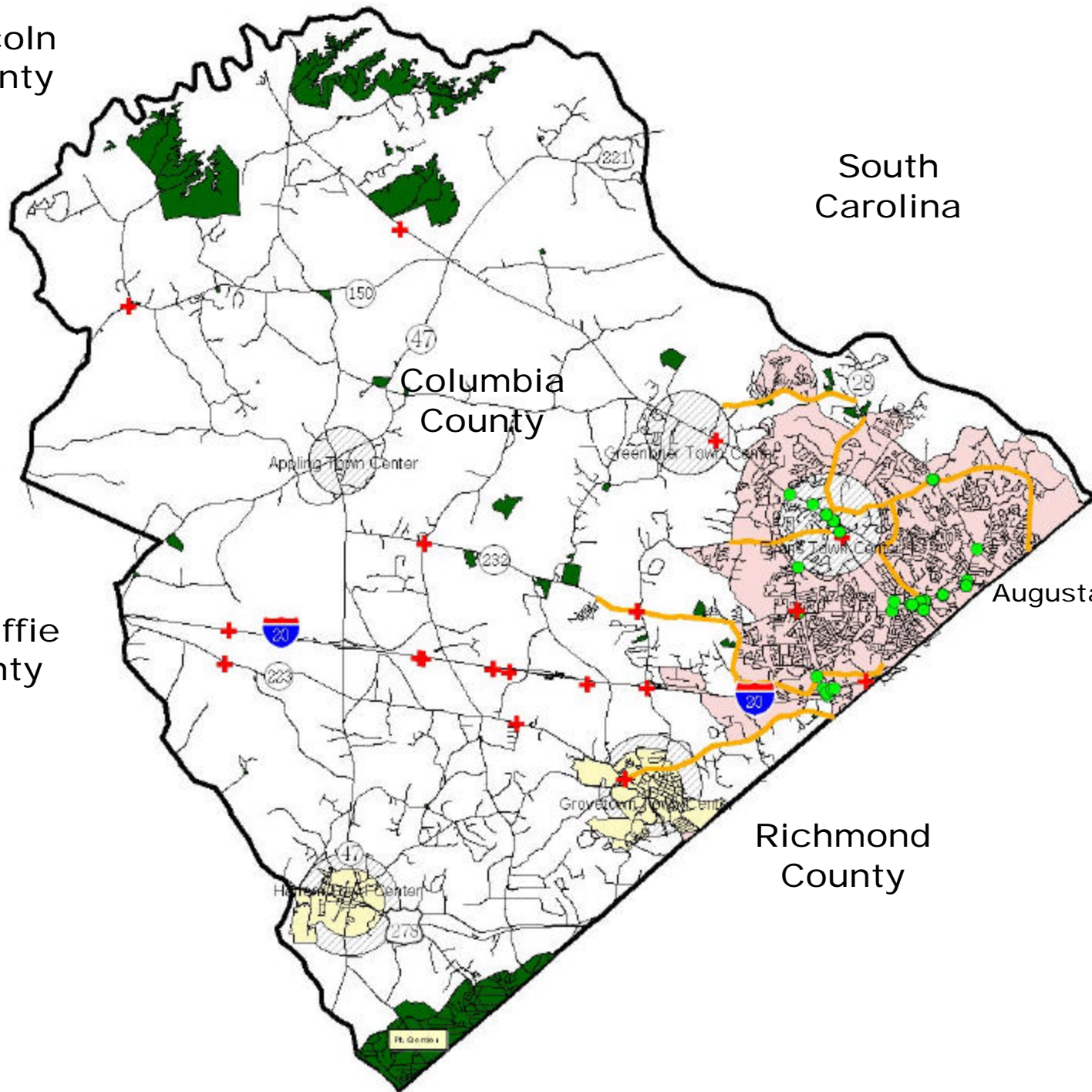


McDuffie
County

Columbia
County

Augusta

Richmond
County



Legend

- Crash Location
 - + At Least 1 Fatal Accident
 - ≥ 10 Injury Per Year
- Corridor Action Plan
 - Safety Analysis Corridor
- Local Roads
 -
- City Boundary
 -
- Town Center
 -
- Urbanized Area
 -
- County Boundary
 -

6.4 Summary of Bridge Deficiencies

GDOT provided bridge condition reports for each bridge within the study area. A general measure of the condition of each bridge is the sufficiency rating. The sufficiency rating is used to determine the need for maintenance, rehabilitation or reconstruction of a bridge structure. With adequate maintenance any structure with a sufficiency rating of above 75 should maintain an acceptable rating for at least 20 years. Structures with a rating between 65 and 75 are less satisfactory and structures with a sufficiency rating of 65 or lower have a useful life of less than twenty years and will require major rehabilitation or reconstruction work during this period.

All bridges with a sufficiency rating of 65 or lower were identified as deficient within the 2025 study horizon and a more detailed assessment of bridge inventory elements was performed to facilitate the ranking of bridges for potential improvement. This information is summarized in Table 6.4, the locations are mapped in Figure 6.4.

Table 6.4
Deficient Bridge Summary

Road	Feature	Location	GDOT Sufficiency Rating	Bridge Replacement TOPPS 2401-1 Criteria						
				Item 58 (£4)	Item 59 (£4)	Item 60 (£4)	Item 67 (£2)	Item 69 (£2)	Item 71 (£3)	Item 72 (£2)
SR 232*	Crawford Creek	4.4 mi NE of Grovetown	36.54	6	6	6/8	2	N	8	7
SR 223	Kiokee Creek	5.8 mi NW of Harlem	51.53	6	6	5/5	5	N	8	7
SR 47*	Keg Creek	6.9 mi N of Appling	54.17	6	7	6/8/6	4	N	8	8
CR 576 / Louisville Rd	I-20	5.2 mi NW of Grovetown	54.65	6	6	6	4	6	N	7
SR 232	Walton Branch	4 mi NE of Grovetown	56.34	6	7	6/6	5	N	8	8
CR 253/Baker Place Rd	I-20	3.7 mi NW of Grovetown	59.03	5	7	6	4	6	N	4
SR 223*	Uchee Creek	2.2 mi NW of Grovetown	61.44	6	6	6/7	5	N	8	8
CR 238/ Chamblin Rd	I-20	2.4 mi NW of Grovetown	62.09	6	8	7	4	6	N	6

*These bridges are currently part of the 2004 – 2006 STIP

Item 58 – Deck Condition

Item 59 – Superstructure Condition

Item 60 – Substructure Condition/Scour Condition/Underwater Condition

Item 67 – Structural Evaluation

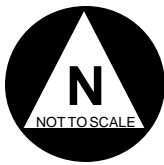
Item 69 – Underside Clearance

Item 71 – Waterway Adequacy

Item 72 – Appropriate Alignment

Lincoln
County

South
Carolina



McDuffie
County

Augusta

Richmond
County



Legend

- ◆ Deficient Bridges
- Roadway Network
 - Collector
 - Inter state
 - Local
 - Minor Arterial
 - Principal Arterial

6.5 Summary of Pedestrian and Bicycle Facilities

Columbia County is currently developing priorities for enhancing their bicycle and pedestrian facilities. The County's goal is to provide a bicycle and pedestrian network to serve the local and regional needs of the communities. It is also the intent of the County to promote these facilities as a safe and healthy transportation option throughout the region for potential users.

There are several activity centers that do not have adequate facilities for bicycles and pedestrians. These activity centers include recreation sites, schools, libraries and commercial development areas. A one mile buffer was placed around these facilities to prioritize areas for bicycle and pedestrian improvements. This information is presented in Figure 6.5.

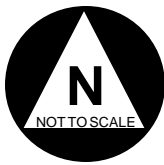
In addition to the bicycle and pedestrian opportunities identified for the activity centers, the ARTS Bicycle and Pedestrian Plan also identifies a number of desired improvements developed through the public involvement process. These projects are outlined in Section 3.5

Criteria were developed to identify and prioritize potential bicycle and pedestrian enhancements beyond those established as part of the ARTS Bicycle and Pedestrian Plan. Key bicycle and pedestrian evaluation criteria include:

- Proximity to Schools and other Public Facilities;
- Infill – Connecting existing pieces of the sidewalk network;
- Connectivity – Access between major bicycle and pedestrian origins and destinations;
- Roadway Expansion – Where roads are reconstructed or constructed along new alignments, provide sidewalks as appropriate;
- As new development occurs, encourage development to provide adequate right of way for bicycle and pedestrian facilities; and,
- Consistency with the GDOT Statewide and ARTS Bicycle and Pedestrian Plan

Figure 6.5 shows the priority areas for bicycle and pedestrian enhancements.

Lincoln
County



South
Carolina

Columbia
County

McDuffie
County

Augusta

Georgia Bicycle and Pedestrian
Statewide Route Network
Augusta Link Corridor

Harlem

Grovetown

Richmond
County

Legend

- Existing
- Ped Only Planned
- Planned
- Schools
- Libraries
- Parks
- Major Roads
- Other Roads
- Study Area
- City Boundary
- Lakes
- Institutional Land
- Urbanized Area Boundary
- County Boundary

6.6 Summary of Public Transit Needs

Limited transit services are available in Columbia County. The following list summarizes the two (2) transit services currently provided in Columbia County:

- Columbia County's Rural Public Transit
 - Vans
 - Service Area
 - Fort Gordon
 - Educational Facilities
 - Employment Centers
 - Shopping Facilities
 - Medical Facilities
 - Recreational Facilities
- Augusta Public Transit
 - Fixed Bus Route System
 - Service Area – Route 5
 - Washington Road
 - Davis Road
 - Pleasant Home Road (Augusta)

Public comment identified that on occasion the on-demand transit service was not able to accommodate users on one day's notice due to capacity restraints and that frequently the window for arrival varied by +/- 3 or 4 hours, making it very difficult for users to meet schedules or needs.

Several factors were evaluated to determine the current needs for transit services in Columbia County, such as, socio-economic data, work travel characteristics, existing transit services and public input. These factors help establish the amount of population considered as transportation disadvantaged and are more likely to need and use public transit. This population is typically made up of low-income, elderly and minority persons. Another indicator is a high percentage of carpooling or households without an automobile. Table 6.6 displays the results of these indicators. The shaded areas indicate census block groups exceeding the state average and potential candidates for transit services and park and ride lots.

Table 6.6
Indicators for Potential Transit Needs

Census Block Group	Over 65	Minority	Below Poverty	Carpool**	Household w/o Auto**
130730301011	14.9%	23.5%	15.7%	10.3%	3.2%
130730301012	9.5%	13.9%	4.4%	10.3%	3.2%
130730301013	2.3%	16.1%	2.7%	10.3%	3.2%
130730301014	4.1%	18.4%	1.7%	10.3%	3.2%
130730301021	7.2%	16.2%	1.2%	10.3%	3.2%
130730302011	19.7%	13.8%	2.2%	10.3%	3.2%
130730302022	12.8%	15.5%	2.9%	10.3%	3.2%
130730302031	5.6%	9.9%	6.2%	10.3%	3.2%
130730302032	5.6%	14.2%	0.6%	10.3%	3.2%
130730302033	2.5%	37.1%	6.0%	10.3%	3.2%
130730303023	7.6%	15.1%	4.4%	10.3%	3.2%
130730303032	4.9%	14.1%	1.5%	10.3%	3.2%
130730303033	4.1%	14.8%	0.8%	10.3%	3.2%
130730303034	5.9%	0.0%	0.0%	10.3%	3.2%
130730303041	3.6%	14.9%	1.0%	10.3%	3.2%
130730303042	11.1%	9.1%	4.0%	10.3%	3.2%
130730303052	6.3%	15.0%	3.9%	10.3%	3.2%
130730304001	12.6%	8.6%	2.7%	10.3%	3.2%
130730304002	21.9%	8.6%	7.2%	10.3%	3.2%
130730304003	9.4%	20.7%	4.0%	10.3%	3.2%
130730304004	10.2%	63.8%	14.4%	10.3%	3.2%
130730304005	8.4%	24.8%	6.3%	10.3%	3.2%
130730304007	7.1%	15.2%	0.0%	10.3%	3.2%
130730305011	7.9%	18.7%	9.1%	10.3%	3.2%
130730305012	11.1%	11.6%	11.1%	10.3%	3.2%
130730305013	11.0%	27.1%	14.9%	10.3%	3.2%
130730305019*	N/A	N/A	N/A	10.3%	3.2%
130730305024	6.5%	19.5%	16.1%	10.3%	3.2%
130730305025	6.5%	26.8%	10.9%	10.3%	3.2%
130730306033	8.0%	14.3%	4.8%	10.3%	3.2%
Countywide	8.0%	17.3%	8.1%	10.3%	3.2%
Statewide	9.6%	34.9%	13.0%	14.5%	8.2%

*Data for Block Group 130730305019 is unavailable because it lies inside of Fort Gordon.

**Data available only at the County level.

6.7 Stakeholder and Public Input

Based on input received at team meetings, public involvement summaries of public comments, a number of deficiencies were identified for the transportation network. The following list is a summary of comments received by the public in regards to the LRTP for Columbia County:

- Grovetown is growing fast, please don't forget the little towns;
- Priority on widening SR 104 and greater connectivity in Evans;
- Speed up the SR 104 Widening Projects;
- Turn lanes needed in front of Evans Towne Center;
- Additional turn lanes needed on Washington Road;
- Dangerous intersections:
 - Old Evans Road and Washington Road
 - Evans to Locks Road and N Belair Road
 - North Belair Road and Ronald Reagan Drive
- Residential housing concerns for widening Flowing Wells Road;
- Widen North Belair Road;
- Build turn lanes on Washington Road from Flowing Wells Road to Gibbs Road or even Halali Farm Road;
- Reconstruct Bobby Jones Highway and Washington Road;
- Stop building in the County;
- Powell Church Road needs to be paved;
- Current paratransit service is inadequate to meet County needs;
- Wider shoulders and bike lanes along secondary roads; and,
- County lacks sidewalks and crosswalks.